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EXAMINER	
ANGEBRANNDT, MARTIN J	
ART UNIT	**PAPER NUMBER**
1756	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/648,609	DRIS ET AL.	
	Examiner	Art Unit	
	Martin J. Angebranndt	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11-14,16-33,35-38,40-42 and 44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11-14,16-33,35-38,40-42 and 44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/8/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The response of the applicant has been read and given careful consideration. Responses to the arguments of the applicant are presented after the first rejection to which they are directed. The amendment to the specification are approved and do not introduce any new matter. Rejection of the previous office action, not repeated below are withdrawn based upon the amendments and arguments of the applicant.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3,5-9,11-14,16-21,27-30,42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niwano et al. '142 and Ohgo '671, further in view of Daecher et al. '829.

Niwano et al. In example 1 teaches a substrate comprising a 50:50 ratio of polydimethyl-1,4-phenylene) ether and polystyrene (see [0033-0034] in the prepub of the instant application) which is injection molded at a temperature of 320 degrees to form a substrate having a diameter of 130 nm, a thickness of 1.2 mm and grooves with a pitch of 1.6 microns, which is then coated with a SiN layer an TbFeCo magnetooptic recording layer and a second SiN layer. The resulting media have a low birefringence, high heat resistance, good strength, dimensional stability and adhesion to the layers applied to it. (3/1-12). The aromatic vinyl monomer may be various styrenes polymers and copolymers with other free radically polymerizable monomers (3/22-41).

Ohgo '671 teaches optical recording media using SIL heads with a 413 nm laser and a 0.8 NA, where a optical disk master having a pitch of 0.32 microns is formed and the depth of the grooves is approximately 25, 50 or 75 nm (thickness of the resist in table 1, as these develop the

entire thickness of the resist and then use plating to form the master) [0065,0068]. The substrate is molded using the stamper master and a reflective layer, an SiN layer, a NdFeCo layer, and SiN layer applied [0079]. The use of TbFeCo [0081] or phase change recording layer materials is disclosed. [0075]. In another example using a phase change recording layer, the substrate is molded using the stamper master and an Al reflective layer, a second dielectric layer, a AgInTeSb recording layer, a first dielectric layer, an adhesive layer and 90 micron polycarbonate sheet are applied [0072]. A similar example using a dye based recording layer is disclosed. [0083-0086].

Daecher et al. '829 teach the use of filtration with a 5 micron metal fiber melt filter (pleated candle type) (example 5, 17/44-46). The formation of optical recording media substrates is disclosed (example 6). The use of melt filtration to remove gels, dirt and foreign particles from the melt. (11/34-46).

It would have been obvious to one skilled in the art to modify the cited example of Niwano et al. '142 by using other grooves with smaller pitches such as those taught by Ohgo '671 with a reasonable expectation of forming a useful optical recording medium with ability to store information at a higher density and/or it would have been obvious to modify the cited example of Ohgo '671, by using the substrate material of Niwano et al. '142 with a reasonable expectation of forming a useful optical recording medium where the substrate demonstrates low birefringence, high heat resistance, good strength, dimensional stability and adhesion to the layers applied to it and to modify the process rendered obvious by the combination of Niwano et al. '142 and Ohgo '671 by using melt filtering to remove particulates having sizes of more than 5 microns as described by Daecher et al. '829 based upon this being described as well known and

conventional for arts involving processing of thermoplastics and compatible with forming optical disc substrates using injection molding.

Further, it would have been obvious the resulting media by using other recording layers, such as phase change recording layers or dye based recording layers, which may include a polycarbonate cover layer atop the upper dielectric based upon the disclosure to do so within Ohgo '671

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is clear than none of the references teach all the limitations. The arguments that the melted (liquid) resin could not be injection molded Niwano et al. '142 to form the finer features taught in Ohgo '671, who also described molding of (molten) resins is without any support and is entirely without merit. Were this an embossing of the solid resin, the applicant might have a point, but the molten resin can be made to flow into the fine features of the mold, particularly under the pressures of injection molding. There is clearly a motivation to form finer pitches is clear in that more tracks allow a higher information content medium to be formed. This is well appreciated in the art. The Daecher et al. '829 is applied to establish that melt filtering is well known in the art of forming optical disk substrates as a treatment of the resin prior to molding.

4. Claims 1-9,11-14,16-21,25,27-31,33,35-38,40-42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niwano et al. '142 and Ohgo '671, in view of Daecher et al. '829 further in view of Saito et al. '261.

Saito et al. '261 teach topside optical recording media which use a cover layer. The cover layer may be made of PANLITE, which is a bisphenol A polycarbonate. [0060]. The use of a protecting layer on the cover layer is disclosed. [0063-0064].

In addition to the basis provided above, the examiner holds that it would have been obvious to one skilled in the art to use PANLITE as the polycarbonate cover layer in media resulting from the combination of Niwano et al. '142, Ohgo '671 and Daecher et al. '829 with a reasonable expectation of forming a useful optical recording medium. The examiner holds that the protective layer atop the protective layer taught by Saito et al. '261 meets the limitation of the high modulus layer of claim 31.

This is a fine tuning of the prior rejection, merely reordering the references. The applicant argues that Saito et al. '261 does not address the defects argued by the applicant. The examiner holds that these have been addressed above and maintains the reordered rejection

5. Claims 1-9,11-14,16-31,33,35-38,40-42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niwano et al. '142 and Ohgo '671, in view of Daecher et al. '829 and Saito et al. '261, further in view of (Ueda et al. JP 2000-315891 or Ito et al. EP 1178068) combined with Ogawa et al. '313.

Ueda et al. JP 2000-315891 (machine translation attached) teaches polystyrene:polycarbonate mixtures useful for optical recording media substrates. These include the use of bisphenol A and bis(4-hydroxyphenyl)methane and hydroxyaryl cycloalkane monomers in these mixtures. (abstract, [0010])

Ogawa et al. '313 teach polycarbonate resins which are useful in optical applications, examples include bisphenol A, bis(4-hydroxyl) menthane and mixtures of these. [0031]. The use

of these as optical disk substrates and as optical sheets for near field recording media is also disclosed. [0002].

Ito et al. EP 1178068 teaches the use of various polycarbonates for use in laser discs and the like [0002]. The use of 2,2-bis(4-hydroxyphenyl)propane (bisphenol A, 4/25+) and bis 1,8-(4-hydroxyphenyl)menthane (sic bis 1,3-(4-hydroxyphenyl)menthane as there are not 8 positions on the cyclohexyl ring) as starting materials.

In addition the basis provided above, the examiner holds that it would have been obvious to one skilled in the art to modify the combination of Niwano et al. '142, Ohgo '671, Saito et al. '261 and Daecher et al. '829 to use other polycarbonate compositions known to be useful in optical recording media, particularly the polycarbonate-polystyrene copolymers disclosed by Ueda et al. JP 2000-315891 or the polycarbonate resins using 2,2-bis(4-hydroxyphenyl)propane (bisphenol A, 4/25+) or bis 1,3-(4-hydroxyphenyl)menthane taught by Ito et al. EP 1178068 based upon the use of polycarbonate resins either in the substrates or the protective layers as taught by Ogawa et al. '313 which are known to be useful in substrates and/or cover layers in place of PANLITE or the polycarbonate sheet taught by Ohgo '671 with a reasonable expectation of forming a useful optical recording media having a cover layer with good transparency and low birefringence. Further it would have been obvious to use a combination of the precursors 2,2-bis(4-hydroxyphenyl)propane (bisphenol A, 4/25+) and bis 1,3-(4-hydroxyphenyl)menthane taught by Ito et al. EP 1178068 based upon the disclosure of the use of copolymers of hydroxyphenyl by Ogawa et al. '313.

The applicant's response fails to appreciate that the substrate materials are taught in Niwano et al. '142 and that Saito et al. '261 establish the use of polycarbonate sheet as a

protective layer and Ueda et al. JP 2000-315891, Ito et al. EP 1178068 and Ogawa et al. '313 are cited to establish useful chemical compositions for these polycarbonate sheet materials.

The applicant argues that the there is no expectation of success in forming the fine pitches in the melted resins taught in the prior art by injection molding. There is no support in the specification or elsewhere in the record to support this. The examiner notes the benefits ascribed to the mixture are more in line with reduced tilt/warpage due to humidity changes (figures 2-4) and tilt/warpage due to curing (figure 5). The data in figure 6 does not seem to support anything beyond control of shrinkage in the molding process as the values bound that of BPA. The high degree in accuracy in the transfer of the pattern can be attributed to the lack of particulates in the resin and one skilled in the art would expect this increased accuracy to be realized whenever particles are removed.

6. Claims 1-9,11-14,16-33,35-38,40-42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niwano et al. '142 and Ohgo '671, in view of Saito et al. '261, Daecher et al. '829, (Ueda et al. JP 2000-315891 or Ito et al. EP 1178068) and Ogawa et al. '313, further in view of Mino et al. '957 or Dris et al. WO 03/021588.

Mino et al. '957 teach silicon hard coat agents provided on protective layers [0060]. The hard coat agents are disclosed as providing wear resistance [0049].

Dris et al. WO 03/021588 teach the provision of high modulus layers to optical recording media, including silicon hardcoats and copolycarbonate esters (6/3-27 and claim 6). These are disclosed as being able to be placed atop the thin film layer and data layers as shown in figure 2 and confer additional stability (3/1-12).

In addition the basis provided above, the examiner holds that it would have been obvious to one skilled in the art to modify the combination of Niwano et al. '142, Ohgo '671, Saito et al. '261, Daecher et al. '829, (Ueda et al. JP 2000-315891 or Ito et al. EP 1178068) and Ogawa et al. '313 as discussed above by adding the silicon hardcoats or copolycarbonate resin overcoats taught by Mino et al. '957 or Dris et al. WO 03/021588 as the overcoating of the protective layer taught by Saito et al. '261 with a reasonable expectation of gaining the increased hardness and/or stability ascribed to the addition of these layers by Mino et al. '957, Dris et al. '405 or Dris et al. WO 03/021588.

The applicant's response fails to appreciate that the substrate materials are taught in Niwano et al. '142 and that Saito et al. '261 establish the use of polycarbonate sheet as a protective layer, Ueda et al. JP 2000-315891 and Ogawa et al. '313 are cited to establish useful chemical compositions for these polycarbonate sheet materials and of Mino et al. '957 or Dris et al. WO 03/021588 are cited to establish the use of silicon hardcoats.

The applicant argues that neither of Mino et al. '957, Dris et al. '405 or Dris et al. WO 03/021588 address the defects argued by the applicant. The examiner holds that these have been addressed above and maintains the rejection

7. Claims 1-9,11-14,16-21,27-30, 42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feist et al. '455, Daecher et al. '829 and Ohgo '671.

Feist et al. '455 in examples 1-8 teach optical recording media which are grooved with grooves 50 nm deep and a pitch of 0.8 microns. [0048-0063]. The coating of various data storage layers on the substrate is disclosed. [0039]. The disclosure of first surface recording media where the substrate is coated with a reflective layer, a dielectric layer, a recording layer, a

dielectric layer and a protective layer is disclosed. [0038]. The protective layer may be materials including polycarbonates [0040]. The use of melt filtration is disclosed as desirable for removing contaminants and/or decomposition products.

It would have been obvious to one skilled in the art to modify the embodiments rendered obvious by the first example of Feist et al. '455 and the teachings of Daecher et al. '829 by using other grooves with smaller pitches such as those taught by Ohgo '671 with a reasonable expectation of forming a useful optical recording medium with ability to store information at a higher density and/or it would have been obvious to modify the cited example of Ohgo '671, by using the substrate material of Feist et al. '455 with a reasonable expectation of forming a useful optical recording medium where the substrate demonstrates low birefringence, high heat resistance, good strength, dimensional stability and adhesion to the layers applied to it. Further, it would have been obvious the resulting media by using other recording layers, such as phase change recording layers or dye based recording layers, which may include a polycarbonate cover layer atop the upper dielectric based upon the disclosure to do so within Ohgo '671.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is clear than none of the references teach all the limitations. The arguments that the melted (liquid) resin could not be injection molded Feist et al. '455 to form the finer features taught in Ohgo '671, who also described molding of (molten) resins is without any support and is entirely without merit. Were this an embossing of the solid resin, the applicant might have a point, but the molten resin can be

made to flow into the fine features of the mold, particularly under the pressures of injection molding. There is clearly a motivation to form finer pitches is clear in that more tracks allow a higher information content medium to be formed. This is well appreciated in the art. The Daecher et al. '829 is applied to establish that melt filtering is well known in the art of forming optical disk substrates as a treatment of the resin prior to molding. The applicant argues that the there is no expectation of success in forming the fine pitches in the melted resins taught in the prior art by injection molding. There is no support in the specification or elsewhere in the record to support this. The examiner notes the benefits ascribed to the mixture are more in line with reduced tilt/warpage due to humidity changes (figures 2-4) and tilt/warpage due to curing (figure 5). The data in figure 6 does not seem to support anything beyond control of shrinkage in the molding process as the values bound that of BPA. The high degree in accuracy in the transfer of the pattern can be attributed to the lack of particulates in the resin and one skilled in the art would expect this increased accuracy to be realized whenever particles are removed. Further there is direction melt filtration in Feist et al. '455

8. Claims 1-9,11-14,16-21,25,27-31,33,35-38,40-42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feist et al. '455, Daecher et al. '829 and Ohgo '671, in view of Saito et al. '261.

In addition to the basis provided above, the examiner holds that it would have been obvious to one skilled in the art to use PANLITE as the polycarbonate cover layer in media resulting from the combination of Feist et al. '455, Daecher et al. '829 and Ohgo '671 with a reasonable expectation of forming a useful optical recording medium. The examiner holds that

the protective layer atop the protective layer taught by Saito et al. '261 meets the limitation of the high modulus layer of claim 31.

The rejection stands for the reasons above as no other arguments were directed at this rejection.

9. Claims 1-9,11-14,16-21,27-30,42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hay et al. '438, Daecher et al. '829 and Ohgo '671.

Hay et al. '438 teach optical recording media substrates in examples 3 and data layers [0078-0081].

It would have been obvious to one skilled in the art to modify the cited example of Hay et al. '438 by using grooved substrates, such as those taught by Ohgo '671 with a reasonable expectation of forming a useful optical recording medium with ability to store information at a higher density and have a laser track accurately on the medium and/or it would have been obvious to modify the cited example of Ohgo '671, by using the substrate material of Hay et al. '438 with a reasonable expectation of forming a useful optical recording medium where the substrate demonstrates low birefringence, high heat resistance, good strength, dimensional stability and adhesion to the layers applied to it. Further, it would have been obvious the resulting media by using other recording layers, such as phase change recording layers or dye based recording layers, which may include a polycarbonate cover layer atop the upper dielectric based upon the disclosure to do so within Ohgo '671 and to using melt filtering to remove particulates having sizes of more than 5 microns as described by Daecher et al. '829 based upon this being described as well known and conventional for arts involving processing of thermoplastics and compatible with forming optical disc substrates using injection molding.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is clear than none of the references teach all the limitations. The arguments that the melted (liquid) resin could not be injection molded Hay et al. '438 to form the finer features taught in Ohgo '671, who also described molding of (molten) resins is without any support and is entirely without merit. Were this an embossing of the solid resin, the applicant might have a point, but the molten resin can be made to flow into the fine features of the mold, particularly under the pressures of injection molding. There is clearly a motivation to form finer pitches is clear in that more tracks allow a higher information content medium to be formed. This is well appreciated in the art. The Daecher et al. '829 is applied to establish that melt filtering is well known in the art of forming optical disk substrates as a treatment of the resin prior to molding. The applicant argues that the there is no expectation of success in forming the fine pitches in the melted resins taught in the prior art by injection molding. There is no support in the specification or elsewhere in the record to support this. The examiner notes the benefits ascribed to the mixture are more in line with reduced tilt/warpage due to humidity changes (figures 2-4) and tilt/warpage due to curing (figure 5). The data in figure 6 does not seem to support anything beyond control of shrinkage in the molding process as the values bound that of BPA. The high degree in accuracy in the transfer of the pattern can be attributed to the lack of particulates in the resin and one skilled in the art would expect this increased accuracy to be realized whenever particles are removed.

10. Claims 1-9,11-14,16-33,35-38,40-42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over either (Feist et al. '455 or Hay et al. '438) combined with Daecher et al. '829 and Ohgo '671, further in view of (Ueda et al. JP 2000-315891 or Ito et al. EP 1178068) combined with Ogawa et al. '313.

In addition the basis provided above, the examiner holds that it would have been obvious to one skilled in the art to modify the combination of either (Feist et al. '455 or Hay et al. '438) combined with Daecher et al. '829 and Ohgo '671 to use other polycarbonate compositions known to be useful in optical recording media, particularly the polycarbonate-polystyrene copolymers disclosed by Ueda et al. JP 2000-315891 or the polycarbonate resins using 2,2-bis(4-hydroxyphenyl)propane (bisphenol A, 4/25+) or bis 1,3-(4-hydroxyphenyl)menthane taught by Ito et al. EP 1178068 based upon the use of polycarbonate resins either in the substrates or the protective layers as taught by Ogawa et al. '313 which are known to be useful in substrates and/or cover layers in place of PANLITE or the polycarbonate sheet taught by Ohgo '671 with a reasonable expectation of forming a useful optical recording media having a cover layer with good transparency and low birefringence. Further it would have been obvious to use a combination of the precursors 2,2-bis(4-hydroxyphenyl)propane (bisphenol A, 4/25+) and bis 1,3-(4-hydroxyphenyl)menthane taught by Ito et al. EP 1178068 based upon the disclosure of the use of copolymers of hydroxyphenyl by Ogawa et al. '313.

The rejection stands for the reasons above as no other arguments were directed at this rejection.

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is

appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claim 1-9,11-14,16-33,35-38,40-42 and 44 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-32 of copending Application No. 10/648540 (US 2005/0046056) in view of Feist et al. '455, Daecher et al. '829 and Ohgo '671.

The claims are directed to both the molding process used to form an optical recording medium substrate and the resulting data storage disks, but are silent on the grooves conventionally formed in these substrate and the data layers. The examiner holds that it would have been obvious to one skilled in the art to modify the claimed invention by forming grooves and data layers such as those disclosed by Feist et al. '455, Daecher et al. '829 and Ohgo '671 to form the claimed optical recording media, noting the similarity, particularly in the disclosure of Feist et al. and Daecher et al. '829.

This is a provisional obviousness-type double patenting rejection.

The applicant argues that no claims are allowed and asks that these rejections be withdrawn. When the claims become allowable this might occur, but the examiner retains these

until either a convincing arguments is made regarding the merits, the copending case is abandoned, the claims of the two applications diverge significantly.

13. Claim 1-9,11-14,16-33,35-38,40-42 and 44 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3,7-16,18-24 & 26-106 of US Patent 7041,780 (which matured from copending Application No. 10/648640 (US 2005/0049362)), in view of Feist et al. '455, Daecher et al. '829 and Ohgo '671.

The claims are directed to both the process used to form the resins and optical recording medium substrate and data storage disks including thèm, but are silent on the grooves conventionally formed in these substrate and the data layers. The examiner holds that it would have been obvious to one skilled in the art to modify the claimed invention by forming grooves and data layers such as those disclosed by Feist et al. '455, Daecher et al. '829 and Ohgo '671 to form the claimed optical recording media, noting the similarity, particularly in the disclosure of Feist et al. and

This is a provisional obviousness-type double patenting rejection.

An indication of allowability is present in the filed of this co-pending application and therefore the provisional nature of this rejection may be withdrawn without prejudice to finality.

The examiner notes that Feist et al. '455 and Daecher et al. '829 teach melt filtration and its affects in terms of particulate removal. The rejection stands.

The applicant is directed to claim 48 of the patent which recites a styrene monomer as the polyalkyenyl aromatric monomer. Further, the addition of Daecher et al. '829 addresses the size of the particulates removed by melt filtration. As the process is molding of a resins, the issue of the ability to hold the fine detail is without merit and the melt can flow into all the voids in the

mold, where a solid might not. Also the optical recording medium substrate is claimed. Claims 57 and 95 recite an optical recording medium. The pitch of 0.32 microns is taught by Ohgo '671 and so the argument that the pitch is not taught in the references is without merit.

14. Claim 1-9,11-14,16-33,35-38,40-42 and 44 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-49 of copending Application No. 10/648647 (US 2005/0049333) in view of Feist et al. '455 and Ohgo '671.

The claims are directed to both the process used to form the resins and an optical recording medium substrate including them, but are silent on the grooves conventionally formed in these substrate and the data layers. The examiner holds that it would have been obvious to one skilled in the art to modify the claimed invention by forming grooves and data layers such as those disclosed by Feist et al. '455 and Ohgo '671 to form the claimed optical recording media, noting the similarity, particularly in the disclosure of Feist et al.

This is a provisional obviousness-type double patenting rejection.

The examiner notes that Feist et al. '455 teaches melt filtration and its affects in terms of particulate removal. The rejection stands.

The applicant argues that no claims are allowed and asks that these rejections be withdrawn. When the claims become allowable this might occur, but the examiner retains these until either a convincing arguments is made regarding the merits, the copending case is abandoned, the claims of the two applications diverge significantly.

15. Claim 1-9,11-14,16-33,35-38,40-42 and 44 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-29 of

copending Application No. 10/648604 (US 2005/0046070), in view of Feist et al. '455, Daecher et al. '829 and Ohgo '671 to form the claimed optical recording media, noting the similarity, particularly in the disclosure of Feist et al. and Daecher et al. '829.

This is a provisional obviousness-type double patenting rejection.

An indication of allowability is present in the filed of this co-pending application and therefore the provisional nature of this rejection may be withdrawn without prejudice to finality.

The examiner notes that Feist et al. '455 and Daecher et al. '829 teach melt filtration and its affects in terms of particulate removal. The applicant argues that no claims are allowed and asks that these rejections be withdrawn. When the claims become allowable this might occur, but the examiner retains these until either a convincing arguments is made regarding the merits, the copending case is abandoned, the claims of the two applications diverge significantly.

The pitch of 0.32 microns is taught by Ohgo '671 and so the argument that the pitch is not taught in the references is without merit the assertion that the resins recited in the claims yield an unobvious advantage over polycarbonate or that the the **melted resins** would not be able to form the fine features is unsupported by any evidence and is without merit. The rejection stands.

16. Claim 1-9,11-14,16-33,35-38,40-42 and 44 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-49 of copending Application No. 11/151494 (US 2005/0233151) in view of Feist et al. '455, Daecher et al. '829 and Ohgo '671 to form the claimed optical recording media, noting the similarity, particularly in the disclosure of Feist et al. and Daecher et al. '829.

This is a provisional obviousness-type double patenting rejection.

An indication of allowability is present in the filed of this co-pending application and therefore the provisional nature of this rejection may be withdrawn without prejudice to finality.

The examiner notes that Feist et al. '455 and Daecher et al. '829 teach melt filtration and its affects in terms of particulate removal. The applicant argues that no claims are allowed and asks that these rejections be withdrawn. When the claims become allowable this might occur, but the examiner retains these until either a convincing arguments is made regarding the merits, the copending case is abandoned, the claims of the two applications diverge significantly.

The applicant argues that no claims are allowed and asks that these rejections be withdrawn. When the claims become allowable this might occur, but the examiner retains these until either a convincing arguments is made regarding the merits, the copending case is abandoned, the claims of the two applications diverge significantly.

17. Claim 1-9,11-14,16-33,35-38,40-42 and 44 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-37 of copending Application No. 10/063004 (US 2002/0094455) in view of Daecher et al. '829 and Ohgo '671 to form the claimed optical recording media, noting the similarity, particularly in the disclosure of Daecher et al. '829.

This is a provisional obviousness-type double patenting rejection.

An indication of allowability is present in the filed of this co-pending application and therefore the provisional nature of this rejection may be withdrawn without prejudice to finality.

The examiner notes that Feist et al. '455 and Daecher et al. '829 teach melt filtration and its affects in terms of particulate removal. The applicant argues that no claims are allowed and asks that these rejections be withdrawn. When the claims become allowable this might occur,

but the examiner retains these until either a convincing arguments is made regarding the merits, the copending case is abandoned, the claims of the two applications diverge significantly.

The pitch of 0.32 microns is taught by Ohgo '671 and so the argument that the pitch is not taught in the references is without merit the assertion that the resins recited in the claims yield an unobvious advantage over polycarbonate or that the the **melted resins** would not be able to form the fine features is unsupported by any evidence and is without merit. The rejection stands.

18. Claim 1-9,11-14,16-33,35-38,40-42 and 44 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of copending Application No. 10/922194 (US 2005/0064129) in view of Feist et al. '455, Daecher et al. '829 and Ohgo '671.

The claims are directed to both the process used to form the resins and an optical recording medium substrate including them, but are silent on the grooves conventionally formed in these substrate and the data layers. The examiner holds that it would have been obvious to one skilled in the art to modify the claimed invention by forming grooves and data layers such as those disclosed by Feist et al. '455 and Ohgo '671 and the polystyrene/polyphenylene resins disclosed by Feist et al. to form the claimed optical recording media using melt filtration as taught by Feist et al. '455 and Daecher et al. '829, noting the similarity, particularly in the disclosure of Feist et al.

This is a provisional obviousness-type double patenting rejection.

The examiner notes that Feist et al. '455 and Daecher et al. '829 teach melt filtration and its affects in terms of particulate removal. The rejection stands.

An indication of allowability is present in the filed of this co-pending application and therefore the provisional nature of this rejection may be withdrawn without prejudice to finality.

The applicant is directed to claim 10 of the co-pending application, which recites a styrene monomer. Further, the addition of Daecher et al. '829 addresses the size of the particulates removed by melt filtration. As the process is molding of a resins, the issue of the ability to hold the fine detail is without merit and the melt can flow into all the voids in the mold, where a solid might not.

The pitch of 0.32 microns is taught by Ohgo '671 and so the argument that the pitch is not taught in the references is without merit the assertion that the resins recited in the claims yield an unobvious advantage over polycarbonate or that the the **melted resins** would not be able to form the fine features is unsupported by any evidence and is without merit. The rejection stands.

19. Claim 1-9,11-14,16-33,35-38,40-42 and 44 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/986611 (US 2005/0129953) in view of Feist et al. '455, Daecher et al. '829 and Ohgo '671 to form the claimed optical recording media, noting the similarity, particularly in the disclosure of Feist et al. and Daecher et al. '829.

This is a provisional obviousness-type double patenting rejection.

An indication of allowability is present in the filed of this co-pending application and therefore the provisional nature of this rejection may be withdrawn without prejudice to finality.

The examiner notes that Feist et al. '455 and Daecher et al. '829 teach melt filtration and its affects in terms of particulate removal. The applicant argues that no claims are allowed and

asks that these rejections be withdrawn. When the claims become allowable this might occur, but the examiner retains these until either a convincing arguments is made regarding the merits, the copending case is abandoned, the claims of the two applications diverge significantly.

The applicant argues that no claims are allowed and asks that these rejections be withdrawn. When the claims become allowable this might occur, but the examiner retains these until either a convincing arguments is made regarding the merits, the copending case is abandoned, the claims of the two applications diverge significantly.

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Martin J Angebranndt
Primary Examiner
Art Unit 1756

4/18/2007